

## **CAMBRIDGE ELECTRIC LIGHT COMPANY SERVICE QUALITY PLAN**

### **1. GENERAL**

#### **A. Provisions**

The following provisions will apply to Cambridge Electric Light Company. In the event of a conflict between this plan and any orders or regulations of the Department, said orders and regulations shall govern. .

#### **B. Definitions**

“Billing Adjustment” will mean a revenue adjustment amount resulting from Departmental intervention in a billing dispute between the Company and a residential customer.

“Circuit” will mean a conductor or system of conductors through which an electric current is intended to flow.

“Company” will refer to Cambridge Electric Light Company unless otherwise indicated.

“Complaint” will mean a formal complaint to the Consumer Division of the Department wherein the Consumer Division creates a systems record with a customer’s name and address.

“Consumer Division Case” will mean a written record opened by the Consumer Division of the Department in response to a Complaint that meets the criteria set forth in Section III.A.

“Customer Average Interruption Duration Index” or “CAIDI” will mean the total duration of customer interruption in minutes (as calculated by application of Section V) divided by the total number of customer interruptions, expressed in minutes per year. CAIDI characterizes the average time required to restore service to the average customer per sustained interruption during the reporting period.

“Customer Equipment Outage” will mean an outage caused by customer operation or the failure of customer-owned equipment.

“Department” will mean the Department of Telecommunications and Energy.

“Electric Distribution” will mean the delivery of electricity over lines that operate at a voltage level typically equal to or greater than 110 volts and less than 69,000 volts to an end-use customer within the Company’s service territory.

“Electric Distribution Facility” will mean plant or equipment used for the distribution of electricity that is not a transmission facility, a cogeneration facility, or a small power production facility.

“Electric Distribution Feeder” will mean a distribution facility circuit conductor between the service equipment, the source of a separately derived system, or other power-supply source and the final branch-circuit overcurrent device.

“Electric Distribution Line Loss” will mean the electrical energy that is lost in the distribution system. Such loss includes (1) energy that is lost directly due to the delivery of electrical energy and results from the physical properties of the system’s wires and transformers and other incidental substation use, and (2) energy that is lost because of diversion, theft, and other unmetered use.

“Electric Distribution Service” will mean the delivery of electricity to the customer by the Company over lines that operate at a voltage level typically equal to or greater than 110 volts and less than 69,000 volts.

“Emergency Call” will mean a telephone call where the caller believes that he or she is confronting special circumstances that might lead to bodily and/or system-related damage if the circumstances remain unaddressed. Examples include, but are not limited to, downed wires, gas leaks, and gas odor reports.

“Excludable Major Event” will mean a major outage event that meets one of the following criteria: (i) the event is caused by earthquake, fire, or storm of sufficient intensity to give rise to a state of emergency being proclaimed by the Governor (as provided under the Massachusetts Civil Defense Act); (ii) any other event that causes an unplanned interruption of service to 15 percent or more of the electric distribution company’s customers in an operating area; or (iii) an event that results from the failure or disturbance of a transmission, power supply, or other system that is not owned or operated by the Company. Notwithstanding the foregoing criteria, an extreme temperature condition would not constitute an Excludable Major Event.

“Lost Work Time Accident Rate” will mean the Incidence Rate of Lost Work Time Injuries and Illness per 200,000 Employee Hours as defined by the U.S. Department of Labor Bureau of Labor Statistics.

“Meter Reading” will mean the act of manually or automatically acquiring customer-specific usage levels of an energy resource, expressed in numerical units, for a defined period by actually consulting the customer’s meter.

“Momentary Outage” or “Momentary Interruption” will mean an outage or interruption of electric service of less than one minute.

“Non-emergency Call” will mean all telephone calls other than emergency calls.

“Operating Area” will mean the Company’s service territory.

“Planned Outage” will mean an outage that is scheduled by the Company and of which customers are notified in advance, including, for example, during the connection of new customers or to ensure the safe performance of maintenance activities.

“Poor Performing Circuit” will mean any distribution feeder that:

- (i) has sustained a circuit SAIDI or SAIFI value for a reporting year that is among the highest (worst) ten percent of that utility's feeders for any two consecutive reporting years; or
- (ii) has sustained a circuit SAIDI or SAIFI value for a reporting year that is more than 300 percent greater than the system average of all feeders in any two consecutive reporting years.

“Restricted Work-Day Rate” will mean the Incidence Rate of Restricted Work cases per 200,000 Employee Hours as defined by the U.S. Department of Labor Bureau of Labor Statistics.

“Service Appointment” will refer to a mutually agreed upon arrangement for service between the Company and the customer that specifies the date for the Company’s personnel to perform a service activity that requires the presence of the customer at the time of service.

“Service Interruption To A High-profile Customer” will mean an outage that has a reasonable probability of involving a high-profile customer, including a hospital, airport, or large manufacturing, commercial, or institutional customer (who has a demand of 1 megawatt or greater).

“System Average Interruption Duration Index” or “SAIDI” will mean the total duration of customer interruption in minutes (as calculated by application of Section V herein) divided by the total number of customers served by the distribution system, expressed in minutes per year. SAIDI characterizes the average length of time that customers are without electric service during the reporting period.

“System Average Interruption Frequency Index” or “SAIFI” will mean the total number of customer interruptions divided by the total number of customers served by the distribution system, expressed in interruptions per customer per year. SAIFI characterizes the average number of sustained electric service interruptions for each customer during the reporting period.

“Sustained Outage” or “Sustained Interruption” will mean an outage or interruption of electric service that lasts at least one minute and is not classified as a momentary outage.

“Transmission and Distribution Revenues” will mean revenues collected through the base rates of a transmission and distribution company.

“Year” will mean calendar year unless otherwise noted.

#### C. Benchmarking

The historical average and standard deviation for benchmarking will be based on the ten most recent years worth of data. This will be a fixed average for the duration of the service quality plan. Where ten years worth of information is not available, the Company will use the maximum number of years of data available, so long as three years are available. As the Company collects additional data, that data will be included in benchmarking until ten years worth of data is collected.

For SAIDI and SAIFI, the historic average and standard deviation for benchmarking will be based on data from the most recent five years prior to the start of the service quality plan.

## II. CUSTOMER SERVICE AND BILLING PERFORMANCE MEASURES

#### A. Telephone Service Factor

The Company will gather data and report statistics on its handling of telephone calls. Call data will be compiled and aggregated monthly. Reporting will occur annually. The reports will be submitted in accordance with Section IX below. The Company will report the percentage of telephone calls that are answered within a time interval that is consistent with its existing telephone response-time measurement system, or as otherwise approved by the Department. Because the Company historically compiled data on this measurement based on a 30-second performance standard, the Company will begin to collect data on a 20-second performance standard and will adopt that standard when it has collected five years of data under the 20-second standard. The Company will also provide, separately, call-handling times for Emergency Calls and Non-Emergency Calls.

Telephone Service Factor will be measured beginning at the point that the caller makes a service selection and ending at the point that the call is responded to by the service area selected by the caller. If the caller does not make a selection, the response time will be measured from a point following the completion of the Company's recorded menu options and ending at the point that a customer-service representative responds to the call.

Telephone Service Factor will be a performance measure subject to a revenue penalty.

B. Service Appointments Met As Scheduled

The Company will gather data and report statistics regarding the number of service calls met on the same day requested, excluding when a customer misses a mutually-agreed upon time. The Company will report the percentage of scheduled service appointments met by Company personnel on the same day requested. Service appointment data will be compiled and aggregated monthly. Reporting will occur annually. The reports will be submitted in accordance with Section IX below. Service Appointments Met As Scheduled will be a performance measure subject to a revenue penalty.

C. On-Cycle Meter Readings

The Company will gather data and report statistics for the percentage of meters that are actually read by the Company, on cycle. The Company will report the percentage of customer meters actually read on cycle. Eligible meters include both residential and commercial accounts. Meter reading data will be compiled and aggregated monthly. Reporting will occur annually. The reports will be submitted in accordance with Section IX below. On-cycle Meter Reading will be a performance measure subject to a revenue penalty.

III. CUSTOMER SATISFACTION MEASURES

A. Consumer Division Cases

Customer complaints will be categorized as a Consumer Division Case where a written record is opened by the Consumer Division using the following criteria:

- (1) the individual making the Complaint provides his or her identity to the Consumer Division and is either a (a) current, prospective, or former customer of the Company against which the Complaint has been lodged, or (b) designee of the current, prospective, or former customer of the Company;
- (2) the individual or his/her designee has contacted the Company from which the customer

receives distribution service prior to lodging a Complaint with the Department;

- (3) the Department's investigator cannot resolve the Complaint without contacting the Company to obtain more information;
- (4) the matter involves an issue or issues over which the Department typically exercises jurisdiction; and
- (5) the matter involves an issue or issues over which the Company has control.

Consumer complaint data and billing adjustment data will be employed as service quality measures. The Department will compile and aggregate monthly the frequency of Consumer complaints. The Department also will compile and aggregate monthly the dollar amounts of Billing Adjustments. The Department will report data on both of these measures annually. The Department will offer company-specific meetings to discuss each Company's performance annually. Revenue penalties will apply to each of these measures.

#### B. Billing Adjustments

The Department will compile and aggregate monthly the dollar amount of residential Billing Adjustments per 1,000 residential customers. The Department will provide such data to each Company on an annual basis. Upon request of the Company, the Department may conduct a company-specific meeting to discuss the Company's performance.

#### C. Consumer Surveys

The Company will provide the results of two surveys to the Department on an annual basis: (1) a customer satisfaction survey of a statistically representative sample of residential customers; and (2) a survey of customers randomly selected from those customers who have contacted the Company's customer service department within the year in which service is being measured. The representative sample will be newly drawn from customers contacting the Company's customer service area in the year previous and will be conducted with a sample of respondents who are *redialed* after having concluded a contact with the Company's customer service area. The surveys, if conducted internally, will be pre-approved by the Department regarding the method and customer questions.

For the residential customer satisfaction survey, the following question will be used: "Using a scale where 1 = very dissatisfied and 7 = very satisfied; how satisfied are you with the service you are receiving from Cambridge Electric Light Company?" For the customer-specific survey, the following question will be used: "Using a scale where 1 = very dissatisfied and 7 =

very satisfied; how satisfied were you with the service you received from the customer service department of Cambridge Electric Light Company?”

Each Company will report the results of these surveys to the Department on an annual basis as specified in Section IX and will include the results from the previous years of the survey up to a maximum of ten years. No benchmarks will be calculated for these survey measures, because no revenue penalty mechanism has been assigned to these measures.

#### IV. STAFFING LEVEL BENCHMARK

Consistent with G.L. c. 164, § 1E, staffing levels will be in accordance with the guidelines and reviewed when the Company files its annual performance data.

#### V. ASSUMPTIONS FOR CALCULATING ELECTRIC RELIABILITY MEASURES

For the purpose of calculating SAIDI, SAIFI, and CAIDI, the following assumptions and criteria are to be used in accumulating outage data for standardizing reliability measurements:

- A. Customer Equipment Outages will be excluded from the calculation of SAIDI, SAIFI, and CAIDI;
- B. Planned outages will be excluded from the calculation of SAIDI, SAIFI, and CAIDI;
- C. Excludable Major Events will be excluded from the calculation of SAIDI, SAIFI, and CAIDI;
- D. Momentary Outages will be excluded from the calculation of SAIDI, SAIFI, and CAIDI;
- E. The beginning of an outage will be recorded at the earlier of an automatic alarm or the first report of no power;
- F. The end of an outage will be recorded at that point that power to customers is restored;
- G. Outages involving a primary distribution circuit will be included in the calculation of SAIDI, SAIFI, and CAIDI. Outages that do not involve a primary distribution circuit (i.e., secondary, line transformer only or service only) will not be included in the standardized indices.

- H. Where only part of a circuit experiences an outage, the number of customers affected will be estimated, unless an actual count is available. When power is partially restored, the number of customers restored also will be estimated.
- I. When customers lose power as a result of the process of restoring power (such as from switching operations and fault isolation), the duration of these additional outages will be included, but the additional number of interruptions will not be included in the calculation.

## VI. RELIABILITY AND SAFETY PERFORMANCE MEASURES

### A. Electric Reliability

The Company will measure SAIDI and SAIFI on an annual basis in accordance with Section V and compare its performance to a benchmark established by Section I.C. SAIDI and SAIFI will be performance measures subject to a revenue penalty in Section VII.

### B. Lost Work Time Accident Rate

The Company will measure annually its Lost Work Time Accident Rate. The Lost Work Time Accident Rate will be a performance measure subject to a revenue penalty in Section VII.

## VII. REVENUE PENALTIES AND PENALTY OFFSETS

### A. Applicability

The revenue penalty for the performance measures set forth in above in Sections II, III, and VI, will be determined in accordance with the penalty formula in Section VII.B. If the Company's annual performance for a performance measure falls within or is equal to one standard deviation from the benchmark, no revenue penalty nor penalty offset will be imposed for that measure. If the Company's annual performance for a measure exceeds one standard deviation up to two standard deviations (to the closest tenth of a decimal point) above the benchmark, it will be subject to the revenue penalty shown in Section VII.B.

If the Company's annual performance for a performance measure exceeds two standard deviations above the benchmark in any year, then the Department may open a formal investigation as to the reasons for the Company's poor performance.

Penalty offsets are calculated in a similar fashion to revenue penalties. If the Company's annual performance for a performance measure falls within or is equal to one standard deviation below



the benchmark, no revenue offset is achieved. If the Company's annual performance is below one standard deviation (to the closest tenth of a decimal point) below the benchmark, it will earn a penalty offset. If the Company falls below two standard deviations in performance, the penalty offset is capped at the level associated with two standard deviations.

Penalty offsets may only be used to offset revenue penalties in the year they occur. Penalty offsets have no value other than to offset revenue penalties. Penalty offsets acquired on any performance measure may be used to offset revenue penalties on any other performance measure.

#### B. Penalty and Penalty Offset Formulas

The revenue penalty formula for all performance measures will be:

$$\text{Penalty}_M = \left[ 0.25 * \frac{(\text{Observed Result} - \text{Historical Average Result})^2}{\text{Standard Deviation}} \right] * \text{Maximum Penalty}$$

If:  $(\text{Observed Result} - \text{Historical Average Result})$  represents performance that is more than one standard deviation worse than the benchmark, and is capped at two standard deviations from the benchmark.

The offset penalty formula for all performance measures will be:

$$\text{Offset}_M = \left[ 0.25 * \frac{(\text{Observed Result} - \text{Historical Average Result})^2}{\text{Standard Deviation}} \right] * \text{Maximum Offset}$$

If:  $(\text{Observed Result} - \text{Historical Average Result})$  represents performance that is more than one standard deviation better than the benchmark, and is capped at two standard deviations from the benchmark.

Where:

$\text{Penalty}_M$  = revenue penalty applied to performance measure M;

$\text{Offset}_M$  = penalty offset applied to performance measure M;

Observed Result = the average actual performance measure achieved in year<sub>y</sub>, rounded to the applicable decimal place as specified for each measure in Section VIII. A;

Historical Average Result = the average historical actual result, based on an arithmetic average

of the previous years<sub>a..x</sub> of historic data, rounded to the applicable decimal place as specified for each benchmark in Section VIII. C;

Standard Deviation = standard deviation of the historical average result; and

Maximum Penalty =  $(PCL_M) * ((AR * 0.02) - CP)$

Maximum Offset =  $(PCL_M) * ((AR * 0.02) - CP)$

Where:

$PCL_M$  = Performance category liability for the measure expressed as a percentage (derived from Section VII. C); and

AR = Annual Transmission and Distribution Revenues of the Company for the applicable year.

CP = Payments to Customers Pursuant to the Customer Service Guarantee

#### C. Apportionment of Penalty Among Performance Measures

Revenue penalties will be apportioned among the various performance measures as follows:

##### Safety and Reliability

SAIDI	22.5 percent
SAIFI	22.5 percent

Lost Work-Time Accident Rate	10.0 percent
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##### Customer Service and Billing

Telephone Answering Rate	12.5 percent
Service Appointments Met	12.5 percent
On-Cycle Meter Readings	10.0 percent

##### Consumer Division Statistics

Consumer Division Cases	5.0 percent
Billing Adjustments	5.0 percent

## VIII. REPORTING REQUIREMENTS

### A. Reliability, Line Loss, and Safety Indices and Rates

The Company will report on an annual basis SAIDI, SAIFI, CAIDI, Lost Work Time Accident Rate, Electric Distribution Line Loss, Restricted Work-Day Rate, and damage to company property. These reports will be submitted in accordance with Section IX below.

CAIDI and SAIDI will be reported in terms of minutes and will be measured and reported to the nearest 100<sup>th</sup> of a minute. SAIFI will be reported to the nearest 1000<sup>th</sup> of a reported outage. The Lost Work Time Accident Rate will be reported to the nearest 100<sup>th</sup> of an accident. Restricted Work-Day Rate will be reported to the nearest 100<sup>th</sup> of a case. Electric Distribution Line Loss will be reported to the nearest 10<sup>th</sup> of a percentage point. The Consumer and Billing Measures will be reported to the nearest 10<sup>th</sup> of a percentage point.

For the annual reports on electric distribution line loss, the Company will provide sufficient substantiation of:

- (1) its Electric Distribution Line Loss value,
- (2) the accompanying adjustments that were made to standardize the value to specific reference conditions, and
- (3) the specific reference conditions.

For the annual reports on damage to company property, the Company will file annually property damage reports on incidents involving property damage of the Company in excess of \$50,000 per incident that is attributed to Company-owned facilities. A report will be submitted within 48 hours of the incident and will include the same information as that submitted for accidents as described in this Section VIII. I.

### B. Past Reliability and Safety Performance Data

The Company will report the Lost Work Time Accident Rate data from the past ten years in the same fashion as in Section VIII.A. The Company will report SAIDI and SAIFI data from the past ten years in the same fashion as in Section VIII.A. The Company will use its best efforts to standardize SAIDI and SAIFI historical data (consistent with the method in Section V). The SAIDI, SAIFI, and Lost Work Time Accident Rate data will be provided in the Company's first annual report submitted in accordance with Section IX below. The Company's first annual report should describe limitations in data that affect standardization of SAIDI and SAIFI, and provide its best estimate of the statistical error inherent in the standardized indices.

C. Benchmarks

The Company will provide the supporting calculations that were used in determining the standard and benchmark values. SAIDI will be reported in terms of minutes and will be measured and reported to the nearest 100<sup>th</sup> of a minute. SAIFI will be reported to the nearest 1000<sup>th</sup> of a reported outage. The Lost Work Time Accident Rate will be reported to the nearest 100<sup>th</sup> of an accident. The Consumer and Billing standards will be reported to the nearest 10<sup>th</sup> of a percentage point. The reports will be submitted in accordance with Section IX below.

The Company will report on an annual basis the Lost Work Time Accident Rate and the Consumer and Billing performance standards and benchmarks that were determined in accordance with Sections II and VI, above. The Company will report on an annual basis the SAIDI and SAIFI performance standards and benchmarks that were determined in accordance with Section VI, above.

D. Annual Major Outage Events

The Company will identify and report on an annual basis the outages that are considered Excludable Major Events. For each major event excludable under the standard above the Company will report the total number of customers affected, the service area affected, the number of customers without service at periodic intervals, the time frame of longest customer interruption, and the number of crews used to restore service on a per shift basis. In addition, the report will include the Company's policy on tree trimming, including its tree trimming cycle, inspection procedures, and typical minimum vegetation clearance requirement from electric lines. These reports will be submitted in accordance with Section IX, below.

E. Capital Expenditure Information

The Company will report on an annual basis the capital investment approved and capital investment completed in the Company's transmission and distribution infrastructure to ensure delivery of reliable electricity. This report will include a list of its major capital investment projects that relate to maintain transmission and distribution reliability and a summary description of each project. The summary will include a list and location of each transmission and distribution facility that was modified, upgraded, replaced, and/or constructed as well as the costs and scope of work involved in the facility modification, upgrade, replacement, and/or construction.

The Company will report the same capital expenditure data from the ten most recent years in the same fashion as in the previous paragraph.

The reports will be submitted in accordance with Section IX below.

F. Spare Component and Acquisition Inventory Policy and Practice

The Company will report on an annual basis its policy for identifying, acquiring, and stocking critical spare components for its distribution and transmission system. The Company's first annual report will address how this policy has changed or evolved over the past 10 years. The reports will be submitted in accordance with Section IX below.

G. Poor Performing Circuits

The Company will identify and report on an annual basis its poor performing circuits. The report on these poor performing circuits will include the following information:

- (1) the feeder or circuit identification number;
- (2) the feeder or circuit location;
- (3) the reason(s) why the circuits performed poorly during the reporting year;
- (4) the number of years that the circuit(s) performed poorly;
- (5) the steps that are being considered and/or have been implemented to improve the reliability of these circuits; and
- (6) the SAIDI or SAIFI value for the specific circuit(s).

The reports will be submitted in accordance with Section IX below.

H. Electric Service Outages

The Company will report distribution and transmission outages consistent with the Department's Outage and Accident Reporting Procedures (see Outage Reporting Protocol Letter, dated August 24, 2001).

I. Other Safety Performance Measures

In compliance with the requirements of G.L. c. 164, § 95, and the Department's August 24, 2001 Outage Reporting Protocol Letter, the Company will report to the Department within a 24-hour period of an accident the following information:

- (1) time and date of incident;
- (2) time and date of the notice to the Department;
- (3) location of the incident;

- (4) a detailed description of the accident including information about fatalities, injuries, facilities and third-party property damage; and
- (5) the name and telephone number of a utility employee who may be contacted about the accident.

IX. SUBMITTING ANNUAL REPORTS TO THE DEPARTMENT

The annual reports described previously will be submitted to the Department by March 1 of each year reflecting the data from the previous year(s) and will be submitted in the following manner:

- A. the original to Secretary, Department of Telecommunications and Energy, One South Station, Boston, Massachusetts 02110;
- B. one copy to the Electric Power Division Director, Department of Telecommunications and Energy, One South Station, Boston, Massachusetts 02110;
- C. one copy to the Rates and Revenues Division Director, Department of Telecommunications and Energy, One South Station, Boston, Massachusetts, 02110;
- D. one copy of the report to the Consumer Division Director, Department of Telecommunications and Energy, One South Station, Boston Massachusetts 02110; and
- E. an electronic copy of the report to the Department, by one of two means:
  - (1) by e-mail attachment to [dte.efiling@state.ma.us](mailto:dte.efiling@state.ma.us); or
  - (2) on a 3.5" floppy diskette, IBM-compatible format to the Director of Electric Power Division, Department of Telecommunications and Energy, One South Station, Boston Massachusetts 02110.The text of the e-mail or the diskette label will specify: (1) an easily identifiable case caption; (2) docket number; (3) name of the person or Company submitting the filing, and (4) a brief descriptive title of document (e.g., comments or petition to intervene). The electronic filing will also include the name, title and phone number of a person to contact in the event of questions about the filing. Text responses will be written in either Word Perfect (naming the document with a ".wpd" suffix) or in Microsoft Word, (naming the document with a ".doc" suffix). Data or spreadsheet responses will be compatible with Microsoft Excel.

X. BILLING INFORMATION

The Company will submit language, for approval by the Department, to be placed on the back

side of customer bills, which notifies customers of (a) their ability to contact the Department regarding service quality complaints or questions, and (b) the Department's website address ([www.magnet.state.ma.us/dpu](http://www.magnet.state.ma.us/dpu)).

#### XI. CUSTOMER SERVICE GUARANTEES

The Company will credit a customer's account by \$25.00 if a meter reading is inaccurate, if the Company knowingly fails to inform a customer that it will be more than 30 minutes late for a service appointment, if there is an error in the direct payment or pay-by-phone billing systems, if the Company fails to inform a customer of a scheduled service interruption or if the Company does not respond to a billing question by the next business day. In addition, if a new residential service line is not connected by the agreed date (after all permits are received), the first month's bill is free (minimum \$25, maximum \$100). Any customer payments credited during the applicable year will be deducted from the maximum offset formulas provided in Section VII.

#### XII. GENERAL RESERVATION

The Department retains the discretion to waive or depart from any provision of these guidelines as the interests of fairness may require.